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UNITED STATES DEPARTMENT OF AGRICULTURE,
AGRICULTURAL RESEARCH ADMINISTRATION,
BUREAU OF PLANT INDUSTRY, SOILS,
AND AGRICULTURAL ENGINEERING

Division of
Mycology and Disease Survey

Plant Industry Station
Beltsville, Maryland

THE PLANT DISEASE SITUATION

Potato and Tomato Late Blight
Tobacco Blue Mold

Cucurbit Downy Mildew
Other Diseases

To: KEY PATHOLOGISTS AND AUTHORIZED PERSONS

ANNUAL SUMMARY
THE PLANT DISEASE WARNING SERVICE IN 1953

Potato and Tomato Late Blight:

The distribution of potato and tomato late blight (Phytophthora infestans) during 1953, as reported to the Plant Disease Warning Service from January 16th to September 25th, is shown on the accompanying map, Figure 1.

Although the disease was somewhat widely reported, particularly on potato, its severity on both crops was relatively light. In many States blight did not appear at all this year or appeared in one or two scattered fields. Two occurrences of blight on tomato transplants were reported, viz.: in Charleston County, South Carolina, and in central Indiana where tomato blight was widespread despite the hot, dry weather.

Rigorous spray schedules, the absence of inoculum owing to the prolonged hot, dry weather of the early summer, adequate amounts of fungicides and their availability all were factors in preventing the appearance or distribution of blight this past season.

Experimental forecasts were continued for the north central States and were highly accurate.

Blue Mold of Tobacco:

Blue mold of tobacco (Peronospora tabacina) was widespread in practically all of the tobacco-growing areas in Georgia, North Carolina, and throughout the southern part of the flue-cured area of Virginia. It was also reported from Florida, Kentucky, Maryland, South Carolina, and Tennessee. It was found on shade tobacco in one field in Hartford County, Connecticut. There was practically no measurable damage in 1953 and plants were plentiful.

Adequate supplies of fungicides were available, and sustained interest in following recommended control practices was noted.

Downy Mildew of Cucurbits:

Downy mildew of cucurbits (Pseudoperonospora cubensis) occurred again this year but damage was slight. It caused moderate losses in local watermelon plantings in South Carolina and was not a serious financial factor on cantaloupes in the same State as the crop was extremely short because of the hot, dry weather of May and heavy infestations of root knot nematode.

Spraying and dusting of the crop and the drought conditions in the early growing season reduced percentage of infection and losses.

Other Diseases:

Reports on diseases other than the downy mildew diseases included in the program covered a wide range of crops and diseases. Most notable of the reports were: (a) the experimental forecast of wheat leaf rust in Oklahoma in 1953; (b) Stewart's disease prospects in Illinois in 1953, which forecast was fulfilled with nearly 100% accuracy; (c) crown rust of oats which caused the greatest loss to oats in Iowa in twelve years; (d) inspection trip reports on the wheat black stem rust situation; and (e) the rust situation in the Prairie provinces of Canada throughout the entire season.

Weather:

The most noteworthy feature of the weather during this year's growing season was the drought principally in the lower Great Plains and southcentral areas, which lasted about six to seven weeks from mid-May to the early part of July. Temperatures averaged 4° to 10° warmer than usual and maximum readings of 95° to over 100° F. occurred on quite a few days. Much of the area had less than 10% of the normal rainfall and nearly all had less than 25%.

Thus, this hot, dry weather, coupled with the regular spraying and dusting programs, kept the mildew diseases relatively inactive this year.

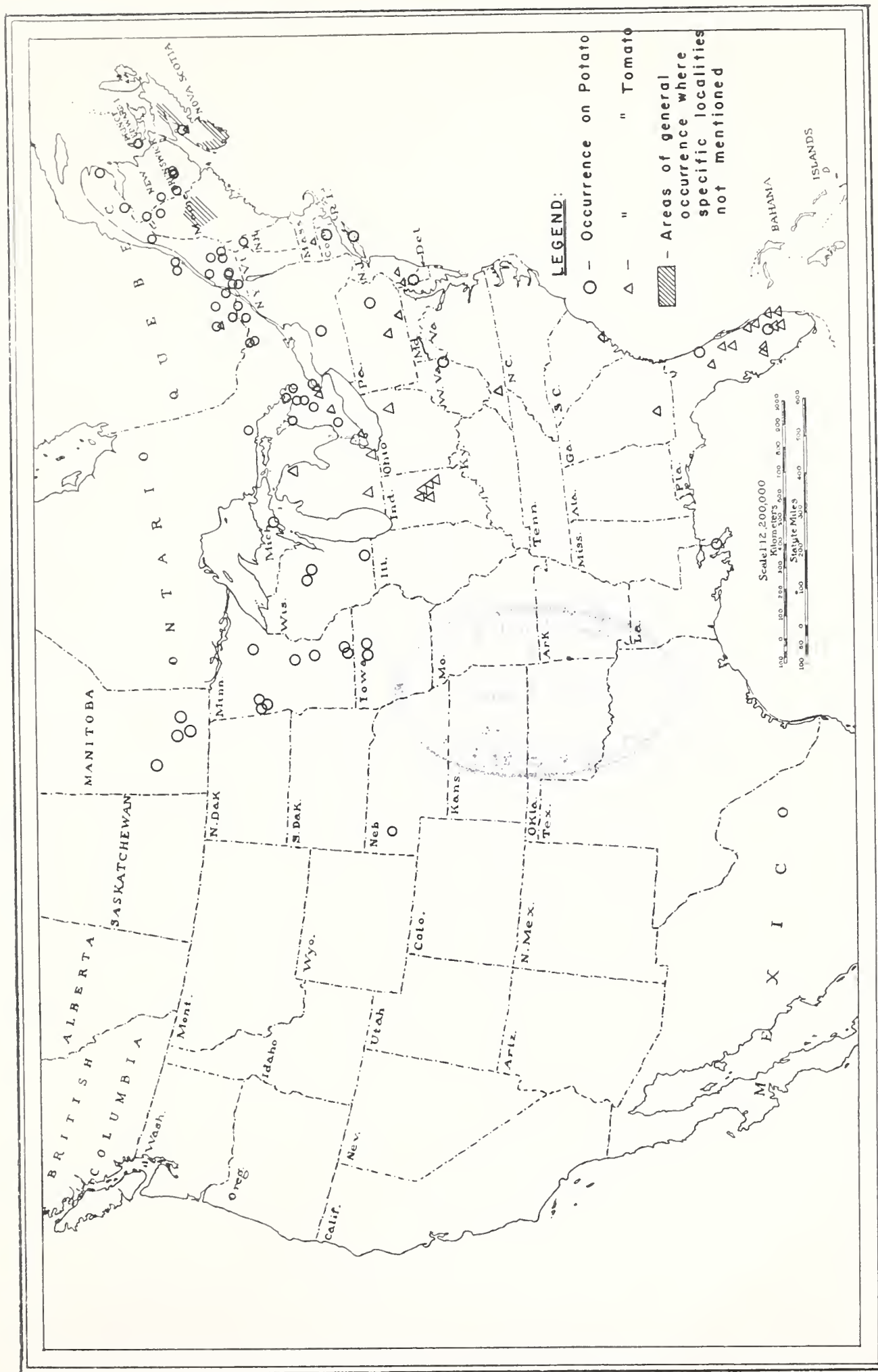


Fig 1. DISTRIBUTION of POTATO and TOMATO LATE BLIGHT in 1953.

